

SN: 10/088,058
Art Unit: 1714

Remarks

Claims 1-12 are currently pending in the above-captioned matter. By this amendment, claim 1 has been amended. New claims 13-19 have been added. Support for this amendment is found at page 3, line 36 to page 4, line 8, page 4, lines 22-31 and page 5, line 30 to page 6, line 12. No new matter has been added. After entry of this amendment, claims 1-19 are pending, claims 1, 10 and 15 being independent. Remarks made herein are based on the claims as amended hereby.

U.S. Patent No. 5,397,638 to Miki et al.

Claims 1-9 were rejected under 35 USC 102(b), or alternatively under 35 USC 103(a) as being unpatentable over Miki et al. (US 5,397,638). Claims 10-12 were rejected under 35 USC 103(a) as also being unpatentable over Miki et al. (US 5,397,638). These rejections are hereby traversed. As the Office is no doubt aware, a rejection under 35 U.S.C. §102 can only be maintained if single reference teaches each and every element of the claims. Claim 1 has been amended to recite a combination of components in amounts not taught by the '638 patent thereby obviating the rejection under 35 USC 102(b). It is respectfully requested that the rejection be withdrawn.

Likewise, the rejection under 35 USC 103(a) over the '638 patent should be withdrawn for both claim 1 and claim 10, and the claims depending therefrom. Both claims recite a combination of components in amounts not taught or suggested by the '638 patent. There is not teaching or suggestion in the '638 patent to alter the amounts taught therein to achieve Applicants' invention.

The '638 patent is directed to a resin-coated steel sheet with a coating formed on the layer of zinc plating or zinc alloy plating (with or without subsequent chromate treatment) and is composed mainly of urethane resin containing (a) either colloidal silica or a silane coupling agent and (b) a phosphate of Al, Ba, Ca, Co, Fe, Mg, Mn or Zn in an amount of 0.01-35 wt % (with or without an additional organic pigment fine powder in an amount of 0.01-40 wt %). There is no motivation in the reference, which is directed to increasing weldability by adding phosphate salts to the resin, to modify the reference teachings to achieve claim 1 or 10. While the Patent Office has stated that there is motivation from the disclosure of the '638 patent, the Office has not

SN: 10/088,058
Art Unit: 1714

specifically pointed out where in the reference this motivation is to be found. The '638 patent does not recognize the importance of using only particulate matter that has a mean particle size of 1.0 μm or less and does not recognize the importance of the amounts recited in claims 1 and 10 to performance.

Applicants recognized the importance of these features and performed the research necessary to achieve improved performance in corrosion, folding adhesion and coin scratching. The combination of components in amounts as recited in claims 1 and 10 is important to the performance of the composition. Table 2 shows that Comparative Examples 4-11, which include (a), (b) and (c) in amounts outside of Applicants' preferred amounts perform poorly in corrosion, folding adhesion and coin scratching. These results show that varying the amount of any one of components (a), (b) or (c) outside that range taught by Applicants causes poor performance. There is no recognition in the '638 patent of the performance problem solved by Applicants and no motivation in the reference to alter it in an attempt to achieve Applicants' claimed invention.

Claim 10 also recites a pH range that is neither taught nor suggested by the '638 patent. The relevance of the pH to performance of the composition is described at page 5, line 30 et seq. of the originally filed application. The effect of pH on the performance of the composition in treating metals is not recognized by the '638 patent, which is silent regarding pH.

Although the Office may suggest that the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such modification. *In re Laskowski* 871 F.2d 115, 117, 10 U.S.P.Q.2d (BNA) 1397, 1398 (Fed. Cir. 1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d (BNA) 1248 (Fed. Cir. 1989). If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990). Based upon the foregoing, the rejections under 35 USC 103(a) should be withdrawn.

New claims 14, 17, 18 and 19 recite a material to adjust the pH of the composition that is neither taught nor suggested by the '638 patent. New claim 15 and its dependent claims recite particles of alumina, zirconia, and titania. These features are neither taught nor suggested by the '638 patent.

SN: 10/088,058
Art Unit: 1714

U.S. Patent No. 4,659,394 to Hara et al.

Claims 1-9 were rejected under 35 USC 103(a) as being unpatentable over Hara et al. (US 4,659,394). This rejection is traversed. As amended, claim 1 recites "from 20 to 60 percent by weight of non-volatile constituents of a component of silane coupling agent". The teaching of the '394 patent is amounts of silane coupling agent of 0.5 to 15 wt %, Col. 10, line 31-33. There is no teaching or suggestion in the '394 patent to use additional silane coupling agent. The reference is silent regarding the desirability of increasing the amount of silane coupling agent and provides no motivation to increase the amount to values within Applicants' claimed range.

As stated above, there must be a teaching in the prior art for the proposed combination or modification to be proper. *Id.* If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *Id.*

Nothing in the '394 patent shows that amounts of silane coupling agent in Applicants' range are desirable. There is no motivation in the reference to increase the silane coupling agent amount and no motivation to increase it to the amounts in Applicants' range. Based upon the foregoing, the rejections under 35 USC 103(a) should be withdrawn.

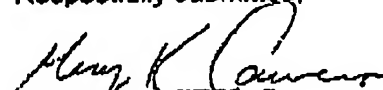
New claims 14, 17, 18 and 19 recite a material to adjust the pH of the composition that is neither taught nor suggested by the '394 patent. New claim 15 and its dependent claims recite particles of alumina, zirconia, and titania. These features are neither taught nor suggested by the '394 patent.

SN: 10/088,058
Art Unit: 1714

Conclusion

Applicants request reconsideration in view of the amendments and remarks contained herein. Applicants submit that the claims are in condition for allowance and a notice to that effect is respectfully requested. Should the Examiner have any questions regarding this paper, please contact the undersigned

Respectfully submitted,



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